

Notice of Allowability

Application No.

10/667,640

Examiner

Thomas K. Pham

Applicant(s)

BURKATOVSKY, VITALY

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 2/10/2006.
2. ☒ The allowed claim(s) is/are 1-15, 17, 19, 20, 22 and 24-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Reasons for Allowance

1. Claims 1-15, 17, 19, 20, 22, 24-33 are allowed.
2. The following is an examiner's statement of reasons for allowance:

While Bhatnagar (U.S. Patent No. 6,739,145) discloses a configurable electronic controller for a wide variety of control functions including the configuring of both analog and digital input, output, user and power supply interfaces, as required, with minimal physical changes, and at low cost. The configurable controller comprising control circuitry for providing control functions, and output interface circuitry for providing output signals to one or more loads. Bhatnagar does not teach a synchronization control module connected to a plurality of configurable signal acquisition modules, a synchronizing signal generator connected with the synchronization control module and with the plurality of input cell, the plurality of control modules are adapted to control each of the plurality of loads according to: a number of output pins of the controller connected to each of the plurality of load, a number of the high-side output drivers connected to the output pins of the configurable controller, and a number of the low-side output drivers connected to the output pins of the configurable controller; and other limitations related to these features in combination with the remaining elements and features of the claimed invention.

And Payne et al. (U.S. Patent No. 5,306,995) discloses a highly flexible electronic control system which is readily reconfigurable to suit more than one machine. The controller includes elements for implementing appliance functions for each of the plurality of appliances by activating the functional elements in a suitable manner, and for preliminarily determining the particular appliance pattern while monitoring others to logically recognize the particular

Art Unit: 2121

appliance. Payne does not teach a synchronization control module connected to a plurality of configurable signal acquisition modules, and a synchronizing signal generator connected with the synchronization control module and with the plurality of input cell, the plurality of control modules are adapted to control each of the plurality of loads according to: a number of output pins of the controller connected to each of the plurality of load, a number of the high-side output drivers connected to the output pins of the configurable controller, and a number of the low-side output drivers connected to the output pins of the configurable controller; and other limitations related to these features in combination with the remaining elements and features of the claimed invention.

Neither of these references taken either alone or in combination discloses a method and controller for acquiring a plurality of signals having all the claimed features of applicant's instant invention, specifically including in the following claims:

Claim 1: a synchronization control module connected to a plurality of configurable signal acquisition modules, and a synchronizing signal generator connected with the synchronization control module and with the plurality of input cells, wherein each one of said plurality of input cells is operable to convert input signals parameters to time-based parameters, and wherein each of the configurable signal acquisition modules is configured to convert the time-based parameters to a required digital forms.

Claim 13: converting the plurality of input signals into a plurality of time-based parameters; and converting the plurality of time-based parameters into required digital forms.

Art Unit: 2121

Claim 17: the plurality of configurable output control logic module is configured to drive only one of the one pair of high-side output driver and low-side output driver, depending on a second side connection of the load.

Claims 19 and 24: the first configurable output control logic module and the second configurable output control logic module are configured to control the one pair of high-side output driver and low-side output driver by two independent signal sources.

Claims 20 and 25: the plurality of configurable output control logic module is configured to simultaneously control the two high-side output drivers,

Claim 22: the plurality of configurable output control logic module is configured to drive only one of the high-side output driver and low-side output driver, depending on a second side connection of the load.

Claims 26 and 30: the plurality of control modules are adapted to control each of the plurality of loads according to: a number of output pins of the controller connected to each of the plurality of load, a number of the high-side output drivers connected to the output pins of the configurable controller, and a number of the low-side output drivers connected to the output pins of the configurable controller.

Also, there is no motivation to combine the Bhatnagar reference with the Payne reference to meet these limitations. It is for these reasons that applicant's invention defines over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

Art Unit: 2121

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday to Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas Pham

Patent Examiner



March 14, 2006



Anthony Knight
Supervisory Patent Examiner
Group 3600